

ABSTRACT

5 Data is protected using locks, with the protected data sometimes being included in the locking messages, which may reduce overall processing latency, and/or reduce a bandwidth requirement for and/or number of storage operations accessing the native storage of the protected data. For example, the lock manager receives lock requests from each of the requesters, and selectively grants the lock requests. The protected data is typically communicated in the locking messages when the lock is highly contested, or at
10 least two request for access to the data are pending. The lock manager initiates the sequence by indicating in a grant message to a requester to include the protected data in its release message. The lock manager then copies this data received in the release message to its grant message to the next requestor. If no other requesters are waiting, the grant message includes an indication not to send the protected data, and thus the requestor
15 typically stores this protected data to storage so it can be accessed in the future.

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